

Title (en)

USE OF CURABLE RESIN COMPOSITION FOR HARD COAT, CURED PRODUCT, AND LAMINATE

Title (de)

VERWENDUNG EINER HÄRTBAREN HARZZUSAMMENSETZUNG FÜR HARTE BESCHICHTUNG, GEHÄRTETES PRODUKT UND LAMINAT

Title (fr)

UTILISATION D'UNE COMPOSITION DE RESINE DURCISSABLE POUR REVETEMENT DUR, PRODUIT DURCI ET STRATIFIÉ

Publication

EP 3255072 B1 20200429 (EN)

Application

EP 16746649 A 20160203

Priority

- JP 2015021819 A 20150206
- JP 2016053173 W 20160203

Abstract (en)

[origin: EP3255072A1] When achieving high hardness by forming a hardcoat layer comprising only organic matter, cure shrinkage increases, a film on which the hardcoat layer is formed curls, and in extreme cases, the hardcoat layer is prone to cracking; on the other hand, when attempting to suppress cure shrinkage, it is difficult for sufficient high hardness to be exhibited. Furthermore, organic/inorganic hybrid curable resin compositions use inorganic matter such as silica in order to increase hardness. However, this leads to the problem of the inherent properties of the resin, such as workability, being lost. The abovementioned problems have been solved by a curable resin composition containing: a urethane (meth)acrylate (A), which is a reactant comprising norbornene diisocyanate (a1) and a compound (a2) having one hydroxyl group and one or more (meth)acryloyl groups in a molecule; and a (meth)acrylate monomer (B), which is a reactant comprising a polyol (b1) having a condensed polycyclic structure, and (meth)acrylic acid (b2).

IPC 8 full level

B32B 27/18 (2006.01); **B32B 27/30** (2006.01); **B32B 27/40** (2006.01); **C08F 283/00** (2006.01); **C08J 7/046** (2020.01); **C09D 151/08** (2006.01)

CPC (source: EP US)

B32B 27/18 (2013.01 - EP US); **B32B 27/30** (2013.01 - EP US); **B32B 27/308** (2013.01 - US); **B32B 27/40** (2013.01 - EP US); **C08F 222/1065** (2020.02 - EP US); **C08F 283/006** (2013.01 - EP); **C08J 7/046** (2020.01 - EP US); **C08K 5/0008** (2013.01 - US); **C09D 151/08** (2013.01 - EP US); **B32B 2305/72** (2013.01 - US); **B32B 2309/105** (2013.01 - US); **B32B 2310/0831** (2013.01 - US); **C08F 283/006** (2013.01 - US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3255072 A1 20171213; **EP 3255072 A4 20180912**; **EP 3255072 B1 20200429**; CN 107207682 A 20170926; CN 107207682 B 20200724; JP 7218998 B2 20230207; JP WO2016125818 A1 20171109; TW 201700647 A 20170101; TW I707927 B 20201021; US 10562996 B2 20200218; US 2018022849 A1 20180125; WO 2016125818 A1 20160811

DOCDB simple family (application)

EP 16746649 A 20160203; CN 201680008603 A 20160203; JP 2016053173 W 20160203; JP 2016573396 A 20160203; TW 105103864 A 20160204; US 201615547161 A 20160203